



## Research on Evaluation Indicator System for Teaching Quality of College Teachers

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### Abstract

This paper conducts research on the connotations and characteristics of evaluation indicator system for teaching quality of college teachers, constructs the contents of the evaluation indicator system for teaching quality of college teachers and applies the contents in the practice of teaching quality monitoring and evaluation so as to prove their rationality and practicability and to achieve the aim of improving management level of teaching quality.

**Keywords:** Teaching quality of teachers, Evaluation, Indicator system

### 1. Introduction

The task of higher education is to cultivate talents of high level, high making, and innovation ability whose personalities and characters are developed healthily and who are of strong social and international competitiveness. The cultivation of talents is realized through education and teaching activities. Teaching is the routine central work of colleges and is realized with teachers as the main body. Therefore, the level of teaching quality of teachers determines the level of the cultivation quality of talents and influences the existence and development of colleges. Evaluation of teaching quality of college teachers is an important part in the management of teaching quality of colleges.

The Ministry of Education and the Ministry of Finance of China jointly issued *Opinions on the Execution of Teaching Quality and Teaching Reform Project in Colleges* and expressly pointed out that the policies and systems on the guidance and evaluation for colleges according to levels and classes of colleges shall be studied and made out. Colleges of different levels and classes shall be given different quality standards and evaluation indicator systems so as to guide colleges to reasonably position themselves, to exert their advantages and to reflect their distinctive features. Effective evaluation on teaching quality of teachers may generate correct guidance and incentive function, activate the enthusiasm of teachers in teaching, advance reforms on teaching contents and methods, and raise teaching quality. Evaluation standard is the ground and key part for the evaluation of teaching quality of teachers and is the premise for ensuring the smooth development of the evaluation of teaching quality of teachers. Therefore, it is of important and realistic meaning to conduct deep and systematic research on evaluation standards of teaching quality of teachers.

### 2. Functions of the indicator system for evaluation of teaching quality of college teachers

In the evaluation of teaching quality of teachers, fixing evaluation indicator system is the most important point and the premise for the smooth development and conduction of evaluation.

#### 2.1 *The construction of evaluation indicator system lays foundation for the evaluation of teaching quality of teachers.*

Material evaluation on teaching quality of teachers must be conducted after evaluation indicators are fixed. Evaluation activities without evaluation indicators will result in that evaluation outcomes will vary with individuals and be random, which can not truly reflect teaching quality of the teachers evaluated.

#### 2.2 *The construction of evaluation indicator system aims at providing reliable grounds for the management of teaching.*

The evaluation of teaching quality of teachers is actually a management activity of teaching quality. As a matter of fact, a scientific and integrated evaluation indicator system for teaching quality of teachers is a set of detailed aims for the management of class teaching quality. Those aims cater for the overall teaching aims of universities. Therefore, they

provide clues and grounds for teaching quality management of universities. Universities may, according to those indicator systems, work out overall working plans for teaching quality management, make clear emphasis and directions for teaching quality management, and ensure the smooth and organized operation of management. Universities could also, by way of referring to those indicator systems, analyze in depth the accumulated relevant department data and find out their advantages and defects in time so as to develop their advantages and diminish defects, fully exert their advantages, make up defects, and regulate teaching management.

*2.3 The construction of evaluation indicator system can push the regulation of teaching activities.* Indicator system is fixed according to the education aims of universities, whilst teaching activities of teachers aim at realizing such education cultivation aims. In order to realize the education cultivation aims of universities, teaching activities of teachers shall be conducted under the regulation of evaluation standards of teaching quality. Otherwise, the education cultivation aims of universities would become nominal. Therefore, although education theories and education practices advocate teaching without fixed methods and personalized teaching, it does not mean that teaching is without any regulations. From such perspective, the construction of evaluation system for teaching quality of teachers actively regulates the teaching activities of teachers without fail.

### **3. The construction of indicator system for evaluation of teaching quality of college teachers**

Teaching activity is a mutual action teaching process between teachers and students with teachers as guiders and students as the main body. The process is realized through class lecture, practice, course design and graduation design. Most universities are conducting various evaluation activities for teaching quality. However, it depends on whether the evaluation main body and methods are scientific, standard, and feasible and whether the evaluation outcome is credible that whether the evaluation can effectively improve teaching activities, teaching work and teaching management, raise teaching level, and ensure the quality of talents cultivation, whilst the science, standards, and feasibility of evaluation activities and the credibility of evaluation outcomes could only be achieved by adopting feasible evaluation methods. At present, from the perspective of evaluation contents, indicator system for evaluation of teaching at universities can be put into three categories, namely, evaluation indicators for class teaching quality, evaluation indicators for experiment teaching quality, evaluation indicators for practice (including course design, practice, graduation design) teaching quality.

The main body in evaluation of teaching quality shall be students because students directly benefit from the teaching effect. The evaluation of students on teachers could truly reflect class teaching effect of teachers. Self-evaluation of teachers, colleague evaluation, leader evaluation, and expert evaluation can, together with student evaluation, form comprehensive teaching quality monitoring and evaluation system, which could help to achieve monitoring and evaluation on teaching quality from multi-perspective, multi-position and multi-level. According to evaluation contents and evaluators, we make out different models for the evaluation indicator system (please refer to T 1) and make full-rounded evaluation on teaching quality from different perspectives. (see Table 1)

In the process of evaluation, different evaluation aims would have different evaluation contents and standards. The aims of the evaluation are to analyze and diagnose problems existing in teaching process and activities and to provide feed back information for teaching activities so as to improve the quality of the on-going teaching activities. Through evaluation, for one hand, we can provide evaluation information so as to enable teachers and students to understand the exiting advantages and problems in teaching and learning, to exert the advantages and to make up the defects. Hence, reform and improvement of teaching will be advanced. For another hand, evaluation can also enable teachers to constantly reflect their class teaching with evaluation outcomes as the reference and to endeavor to raise their teaching quality. With such aims, it is required not to sedulously pursue objectiveness and exactness of evaluation. However, the key is the effectiveness of evaluation. For the contents of evaluation indicators, we shall focus on the pertinence of evaluation and give prominence to specialties rather than comprehensiveness or details. At present, evaluation indicators for teaching quality that we do researches on mainly include teaching attitude, teaching methods, teaching contents, and teaching effects. For detailed connotations and classes, let us take the evaluation indicators of class teaching quality by students for example. Please refer to Table 2.

### **4. Analysis on the evaluation outcomes of teaching quality of college teachers**

The evaluation of teaching quality of teachers in our school is conducted through internet. After the evaluation, through information processing platform, we collect and analyze various evaluation information of each teacher so as to understand the overall situation of the teaching quality of all teachers and the individual situation of each teacher as well as the problems existing in teaching process.

We collected the original data of students' evaluation, took evaluation indicators for class teaching quality by students as an example, applied principle component analysis method in mathematics to demonstrate whether the item contents of the connotations of evaluation indicator system are all rounded, and did research on the influence imposed by the set-up of the connotations of the evaluation indicators on the scores that students gave when evaluating teaching levels

of teachers. As shown in Table 3, common factor variance refers to the extracted proportion of the information contained in the evaluation items (variables) after the common factor is extracted, or the proportion that can be explained by the common factor in the variance of the original variables. It can be seen from the table that even if one principle component (common factor) is extracted, the smallest in the second column is 90.4% of its original information. Therefore, only extracting one principle component will have strong explanation capacity of the variables.

Extraction method: principle component analysis

Such outcome reveals that if a student accredits his or her teacher, he or she will give high scores to all of the evaluation connotations for the teacher. To put it in other way, when a student scores his or her teacher, he or she usually depends on a general impression rather than reasoning each item and then giving a final score. For example, when a student accredits the teaching of teacher, even though this teacher does not do so well in certain aspect, the student won't give a low score to the corresponding evaluation item. Similarly, if a student is dissatisfied with a teacher, usually, he or she will give low scores to all the evaluation items for the teacher. That is to say, to certain extent, different settings up of evaluation items will not remarkably influence the final scores of teachers. For another hand, such outcome also indicates that the setting up of the evaluation items can be more simple, which will not influence greatly the evaluation outcome.

## 5. Conclusion

Through analysis on principle components, we can come to such a conclusion: usually, students just evaluate teachers on the basis of their general impression of teachers and the evaluation outcome will not be remarkably influenced by the setting up of the evaluation connotations. Therefore, we can simplify the evaluation connotations to the utmost degree and compress the original ten items to three items, even less, which can save the workload and time of management workers and students, evidently raise work efficiency and will be welcomed by students. However, the human-oriented thoughts reflected in the "quality project" shall not only take the development of students as the basis, but also take the development of teachers as the basis. Besides proving rules for students to evaluate teachers, a more important function of the connotations of the evaluation indicators shall be that teachers could constantly examine their teaching process by referring to the evaluation indicator connotations so as to advance the reform and improvement of teaching.

To sum up, the construction of evaluation indicators for teaching quality of teachers shall not just simply pursue simplicity principle. The key point is the practicability of the evaluation indicators, that is, whether it is beneficial for the improvement and increase of class teaching quality and whether it can positively advance the regulation on education and teaching activities of teachers. To put it simple, the construction of evaluation indicators for teaching quality of teachers shall try best to be simple under the premise of practicability.

## References

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Table 1. Evaluation indicator system model for teaching (EI is short for evaluation indicator)

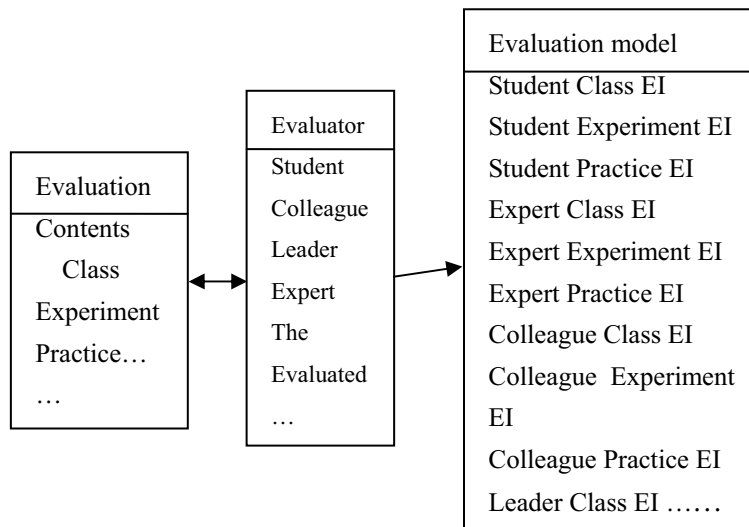


Table 2. Evaluation indicators of class teaching quality by students

No.	Connotations of the evaluation indicators				
1	Teachers are full of ardor for teaching and are freshen when giving classes	Excellent	Good	Medium	Poor
2	Teaches have and dismiss classes on time, do not move classes randomly, and are strict with students				
3	When giving classes, the thoughts of teachers are clear, the contents are well-organized, the information taught is large, and the classes are creative				
4	The arrangement of class progress, experiment/visit and discussion is reasonable and in order				
5	Teachers can choose teaching methods according to teaching contents, which deepens students' understanding of courses				
6	Teachers can check or analyze in time the schoolwork/exams/tutorship				
7	Teachers can adopt enlightening or participation teaching to guide students' reasoning				
8	Teachers guide and encourage students to apply scientific knowledge of their disciplines to resolve actual problems.				
9	The teaching methods of teachers are proper, which helps increase students' interest and helps students gain a lot				
10	Teachers love their jobs and are diligent with noble morality. Students hence respect the teachers				

Table 3. Analysis on the evaluation indicators for class teaching quality by students

	Original	Extracted
T1	1.000	.923
T2	1.000	.904
T3	1.000	.955
T4	1.000	.951
T5	1.000	.961
T6	1.000	.935
T7	1.000	.968
T8	1.000	.956
T9	1.000	.958
T10	1.000	.943